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Department of Environmental Quality
Division of Air Quality

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Title V Operating Permit

PERMIT NUMBER: 4900080002
DATE OF PERMIT: January 30, 2003
Date of Last Revision: January 30, 2003

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Payson City Corporation
439 West Utah Ave.
Payson, UT 84651

Permitted Location:

Payson City Power
1100 N 100 E
Payson, UT 84651

UTM coordinates: 4,432,650 meters Northing, 437,060 meters Easting
SIC code: 4911

ABSTRACT

Payson City Power is owned and operated by Payson City Corporation. The power plant is a standby electric generation facility for the Utah Associated Municipal Power System (UAMPS). The annual power production varies upon the demand from the UAMPS. The power plant has four electric generators. Each generator is powered by a dual fuel internal combustion engine equipped with an automatic air/fuel controller. Each engine has a separate stack for the exhaust emissions. Payson City Corporation is a major source of NO_x and CO.

UTAH AIR QUALITY BOARD

By:

Richard W. Sprott, Executive Secretary

Prepared By:

James Chapman

Operating Permit History

4/18/1997 - Permit issued	Action initiated by an initial operating permit application	
12/3/1997 -Permit modified	Action initiated by an administrative amendment (initiated by DAQ)	This permit is modified to revise the provision in the operating permit superseding previously issued approval ordesrs and to correct the error on the annual compliance certification date.
9/17/1998 -Permit modified	Action initiated by a reopening of an operating permit for cause	The reopening is to modify Provision I.U.1 of the permit to reference the inventory rule directly. In addition, the wording on some reporting requirements has been changed to cross reference section I of the permit. Also, condition II.B.6.a.1 has been changed to be consistent with the language used for other municipal power plants.
1/30/2003 - Permit issued	Action initiated by a renewal of an operating permit	Title V permit is renewed.

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: General Provisions

I.A. **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay

any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. **Permit Expiration and Renewal.**

I.D.1 **This permit is issued for a fixed term of five years and expires on January 30, 2008**. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by July 30, 2007. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. **Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than **March 31, 2003** and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such

methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b)

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N. **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P. **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q. **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii)

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 7 days**. Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and
Environmental Justice (mail code 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

For reports, notifications, or other correspondence related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII
Office of Partnerships & Regulatory Assistance
Air & Radiation Program (mail code 8P-AR)
999 18th Street, Suite 300
Denver, CO 80202-2466
Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. **Inventory Requirements.**

I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

Section II: SPECIAL PROVISIONS

II.A. **Emission Unit(s) Permitted to Discharge Air Contaminants.**

(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Dual Fuel Internal Combustion Engine** (designated as Unit 1)
Unit Description: 2,650 kW with automatic air/fuel ratio controller

II.A.2 **Dual Fuel Internal Combustion Engine** (designated as Unit 2)
Unit Description: 2,650 kW with automatic air/fuel ratio controller

II.A.3 **Dual Fuel Internal Combustion Engine** (designated as Unit 3)
Unit Description: 2,093 kW with automatic air/fuel ratio controller

II.A.4 **Dual Fuel Internal Combustion Engine** (designated as Unit 4)
Unit Description: 1,800 kW with automatic air/fuel ratio controller

II.A.5 **Dual Fuel Internal Combustion Engines** (designated as Unit Engines)
Unit Description: includes Unit 1, 2, 3 and 4

II.A.6 **Diesel Generator** (designated as Unit 5)
Unit Description: 186 hp

II.A.7 **Methane Fueled Boiler** (designated as Unit 6)
Unit Description: 300 hp, Pre-1969 unit. No unit-specific applicable requirements.

II.A.8 **Emergency flare** (designated as Unit 7)
Unit Description: Pre-1969 unit. No unit-specific applicable requirements.

II.A.9 **Paint Booth** (designated as Unit 8)
Unit Description: Used for Payson City Vehicles.

II.A.10 **Miscellaneous Emission Units 1** (designated as Unit Misc1)
Unit Description: includes following units: Thirteen Natural Gas Space Heaters (less than 0.5 MMBtu/hr each), Natural Gas Water Heater (1 MMBtu/hr). No unit-specific applicable requirements.

II.A.11 **Miscellaneous Emission Units 2** (designated as Unit Misc2)
Unit Description: includes following units: Three Above Ground Storage Tanks, Two Diesel Day Tanks, Two Diesel Tanks, Two Glycol Tanks, One Glycol Surge Tank, Two Underground Diesel Storage Tanks. No unit-specific applicable requirements.

II.A.12 **Miscellaneous Emisssion Units 3** (designated as Unit Misc3)
Unit Description: includes following units: Steam Cleaner, Two Parts Cleaners, Sand Blaster, Gas Dispensers, Cooling Tower, Oil/Water Separator and Diesel Fuel Pump. No unit-specific applicable requirements.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide)**

II.B.1.a **Condition:**

Sulfur content of the fuel oil combusted shall be no greater than 0.5 percent by weight. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.1.a.1 **Monitoring:**

Compliance with this limitation shall be determined either by testing each fuel delivery for the sulfur content or by inspection of the fuel sulfur-content

specifications provided by the vendor in purchase records. Sulfur content in either instance shall be determined in accordance with ASTM-4294, or equivalent.

II.B.1.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Dual Fuel Internal Combustion Engine (Unit 1)**

II.B.2.a **Condition:**

The stack exhaust temperature shall be maintained between 775 degrees F and 875 degrees F. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.2.a.1 **Monitoring:**

The exhaust temperature after the turbo charger shall be continuously monitored by the sensor associated with automatic air/fuel ratio controller. The monitoring data shall be recorded hourly.

II.B.2.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b **Condition:**

Emissions of CO shall be no greater than 2.28 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.2.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for CO emissions - 40 CFR 60, Appendix A, Method 10.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.2.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c **Condition:**

Emissions of NO_x shall be no greater than 4.96 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.2.c.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.2.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.c.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on Dual Fuel Internal Combustion Engine (Unit 2)**

II.B.3.a **Condition:**

The stack exhaust temperature shall be maintained between 775 degrees F and 875 degrees F. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.3.a.1 **Monitoring:**

The exhaust temperature after the turbo charger shall be continuously monitored by the sensor associated with automatic air/fuel ratio controller. The monitoring data shall be recorded hourly.

II.B.3.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.b **Condition:**

Emissions of CO shall be no greater than 2.28 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.3.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for CO emissions - 40 CFR 60, Appendix A, Method 10.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.3.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.c **Condition:**

Emissions of NO_x shall be no greater than 4.96 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.3.c.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.3.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.c.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Dual Fuel Internal Combustion Engine (Unit 3)**

II.B.4.a **Condition:**

The stack exhaust temperature shall be maintained between 725 degrees F and 825 degrees F. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.4.a.1 **Monitoring:**

The exhaust temperature after the turbo charger shall be continuously monitored by the sensor associated with automatic air/fuel ratio controller. The monitoring data shall be recorded hourly.

II.B.4.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b **Condition:**

Emissions of CO shall be no greater than 2.78 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.4.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for CO emissions - 40 CFR 60, Appendix A, Method 10.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.4.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c **Condition:**

Emissions of NO_x shall be no greater than 7.69 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.4.c.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.4.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.c.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Dual Fuel Internal Combustion Engine (Unit 4)**

II.B.5.a **Condition:**

The stack exhaust temperature shall be maintained between 725 degrees F and 825 degrees F. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.5.a.1 **Monitoring:**

The exhaust temperature after the turbo charger shall be continuously monitored by the sensor associated with automatic air/fuel ratio controller. The monitoring data shall be recorded hourly.

II.B.5.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b **Condition:**

Emissions of CO shall be no greater than 3.16 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.5.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for CO emissions - 40 CFR 60, Appendix A, Method 10.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.5.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.c **Condition:**

Emissions of NO_x shall be no greater than 8.76 g/kW-hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.5.c.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years based on the date of the last stack test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location. (R307-165-2)

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(e). Calculations. To determine mass emission rates (g/kW-hr) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate, divided by the engine's power output during the test and multiplied by any necessary conversion factors.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)

II.B.5.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.c.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.6 **Conditions on Dual Fuel Internal Combustion Engines (Unit Engines)**

II.B.6.a **Condition:**

The permittee shall use natural gas as the primary fuel in all of the dual fuel engines. Distillate fuel oil #1 or #2, or a combination of #1 and #2, may be used only during: a 15-minute start-up and shut-down period; as backup fuel during periods of natural gas curtailment; for maintenance firings; for break-in firing; system electrical power outages; and as pilot fuel. Natural gas curtailment is defined as period when the natural gas provider/supplier imposes a curtailment or interruption of service, and the curtailment is involuntary and beyond the control of the permittee. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.6.a.1 **Monitoring:**

An operation log shall be used to record the engine running time during start-up, shut-down, natural gas curtailment, maintenance firing, break-in firing, system electrical power outages, and normal operation.

II.B.6.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.b **Condition:**

Emissions of CO shall be no greater than 121 tons per rolling 12-month period for all Unit Engines combined. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.6.b.1 **Monitoring:**

Compliance with the emission limitation shall be determined by the following equation:

Emissions (tons/rolling 12-month period) = (Power production in kW-hrs/rolling 12-month period) x (Emission factor in grams/kW-hr) x (1 lb/453.59 g) x (1 ton/2000 lbs)

Emission factor shall be derived from the most recent emission test results required by this permit.

Emissions for each pollutant shall be the sum of emissions from each engine. Power production shall be determined on a rolling 12-month total. Within the first 10 days of each month a new 12-month total shall be calculated using data from the previous 12 months.

II.B.6.b.2 **Recordkeeping:**

The number of kilowatt hours generated by each engine shall be recorded on a daily basis. Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.c **Condition:**

Emissions of NO_x shall be no greater than 268 tons per rolling 12-month period for all Unit Engines combined. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.6.c.1 **Monitoring:**

Compliance with the emission limitation shall be determined by the following equation:

Emissions (tons/rolling 12-month period) = (Power production in kW-hrs/rolling 12-month period) x (Emission factor in grams/kW-hr) x (1 lb/453.59 g) x (1 ton/2000 lbs)

Emission factor shall be derived from the most recent emission test results required by this permit.

Emissions for each pollutant shall be the sum of emissions from each engine. Power production shall be determined on a rolling 12-month total. Within the first 10 days of each month a new 12-month total shall be calculated using data from the previous 12 months.

II.B.6.c.2 **Recordkeeping:**

The number of kilowatt hours generated by each engine shall be recorded on a daily basis. Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.d **Condition:**

Visible emissions shall be no greater than 10 percent opacity except for 15 minutes at start-up and shutdown. When straight diesel fuel is used, visible emissions shall be no greater than 20 percent opacity except for 15 minutes at start-up and shutdown . [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.6.d.1 **Monitoring:**

Opacity observations of emissions shall be conducted semi-annually in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.6.d.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.7 **Conditions on Diesel Generator (Unit 5)**

II.B.7.a **Condition:**

Hours of operation shall be less than 504 hours per 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.7.a.1 **Monitoring:**

An hour meter shall be used to continuously monitor the hours of operation for the affected equipment. Readings shall be taken monthly to determine the total operating hours for that month. Compliance with the limitation shall be determined on a rolling 12-month total. Each month, a new 12-month total shall be calculated using data from the previous 12 months.

II.B.7.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.7.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.7.b **Condition:**

Visible emissions shall be no greater than 20 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.7.b.1 **Monitoring:**

Opacity observations of emissions shall be conducted annually in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.7.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.7.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8 **Conditions on Paint Booth (Unit 8)**

II.B.8.a **Condition:**

Coating consumption shall be no greater than 30 gallons per year. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.8.a.1 **Monitoring:**

The purchase records, inventory records and operation log shall be used to determine the annual consumption.

II.B.8.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.8.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8.b **Condition:**

All air exiting the paint booth shall pass through paint arrestor particulate filters before being vented to the atmosphere. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.8.b.1 **Monitoring:**

Inspections of paint booth filter type, installation, and condition shall be made and recorded in the operation log befor each operation. Filters that are the wrong type, improper installation, or in poor condition shall be immediately repaired or replaced.

II.B.8.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.8.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8.c **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-931-96]

II.B.8.c.1 **Monitoring:**

Opacity observations of emissions shall be conducted annually in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.8.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.8.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C. **Emissions Trading.**

(R307-415-6a(10))

Not applicable to this source.

II.D. **Alternative Operating Scenarios.**

(R307-415-6a(9))

Not applicable to this source.

Section III: PERMIT SHIELD

A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-931-96 dated September 30, 1996

1. **Comment on an item originating in DAQE-931-96, condition #11 regarding Dual Fuel Internal Combustion Engines (Unit Engines)**

   Visible emissions: There are several periods when the visible emissions from engines can exceed 10% opacity, i.e., during start-up or shut-down, maintenance firing, break in firing and natural gas curtailment when straight fuel oil is used. The operating permit application requests the exemption from 10% opacity limit for these periods. According to condition #11 in AO DAQE-931-96, the opacity limit is 20 percent when straight fuel oil is used. [Comment last updated on 8/15/2002]

2. **Comment on an item originating in DAQE-931-96, condition #14 regarding Dual Fuel Internal Combustion Engines (Unit Engines)**

   Fuel usage: The "dual fuel" engine is defined as a gaseous fueled engine using the combustion of a tiny spray of liquid diesel fuel to ignite the gas-air mixture in place of a spark plug. The tiny bit of liquid diesel fuel is called "pilot fuel" because it acts as a "pilot light" to ignite the gaseous portion of the fuel charge.

   The traditional "dual fuel" engine uses about 95% gaseous fuel ignited by about 5% liquid pilot fuel at a full load normal operation, in terms of heat input. The amount of diesel fuel injected to an engine is fixed by rack setting while the natural gas is supplied based on the loading requirement. The proportion of fuel consumption during normal operation is a feature of an engine design. A dual fuel engine runs pilot fuel during normal operation, as a natural gas engine runs natural gas (spark ignited) and a diesel engine runs diesel.

   Natural gas curtailment is defined as period when the natural gas provider/supplier imposes a curtailment or interruption of service, and the curtailment is involuntary and beyond the control of the permittee [Comment last updated on 8/15/2002]

3. **Comment on an item originating in Section IX.H.2.a regarding Dual Fuel Internal Combustion Engines (Unit Engines)**

   Stack test notification: Stack test notification:
   Utah Air Conservation Rule R307-165-2 requires the emission testing notification to the Executive Secretary at least 30 days prior to conducting a test. The Utah State Implementation Plan (SIP), Section IX.H.2.a.A requires the emission testing notification at 45 days prior to the test. The pretest conference at least 30 days prior to the test is also required by the SIP. Payson City Power is in Utah County and therefore the SIP requirement applies. [Comment last updated on 1/30/2003]

4. **Comment on an item originating in DAQE-931-96 regarding Dual Fuel Internal Combustion Engines (Unit Engines)**

Testing requirement: Testing requirement:
The condition #9 of AO, DAQE-931-96, requires that stack testing be conducted every three years. Based on the information provided by the source and other requirements in the operating permit, the stack test every three years is adequate to determine compliance with the emissions limiations. The justifications are summarized below:

For engines No.1 and No. 2, stack tests for NO_x and CO emissions have been conducted in 1988, 1993 and 1996, respectively. The test results show compliance with the NO_x and CO limitations. Engines No.3 and No. 4 were operational since 1994. Stack testing performed in 1996 indicated that the NO_x and CO emissions were less than 75% of the emission limitations.

The annual emission limitations for the four engines are 268 tons/year for NO_x and 121 tons/year for CO. Since the engines' operation schedules depend on power requirements, the actual emissions can be much lower than the allowable. From May 1994 to May 1996, the actual NO_x emissions are around 115 tons/year and CO emissions are around 55 tons/year.

The four engines are equipped with automatic air/fuel ratio controller which can maintain the conditions required to operate enignes under the emissions limitations. One of the most important conditions, the stack exhaust temperature has been established for each engine and set in the permit. The operating permit requires the continuous monitoring of the temperature, which will indicate potential emissions problems. [Comment last updated on 2/20/1997]

5. **Comment on an item originating in DAQE-931-96 regarding Dual Fuel Internal Combustion Engines (Unit Engines)**

Stack exaust temperature monitoring: The stack temperatures are monitored and maintained between ranges as an indicator for the proper operation of the air/fuel controllers. [Comment last updated on 9/12/2002]